Hold Down Details To Timber Framing

Introduction

Details on this sheet provide fixing arrangements and capacities for hold-down details to Timber Framing designed in MiTek software. Table 1 gives maximum allowable uplift forces for each hold-down fixing arrangement to single, double and triple truss heel joints.

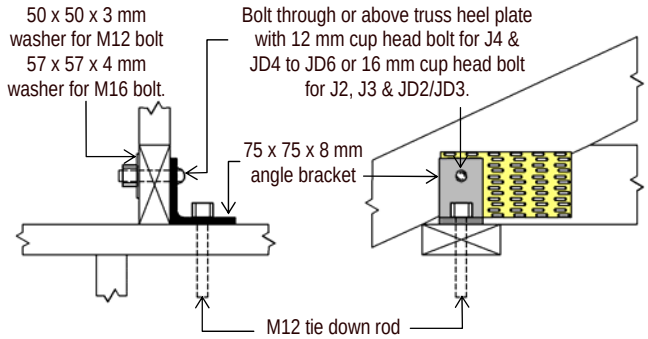
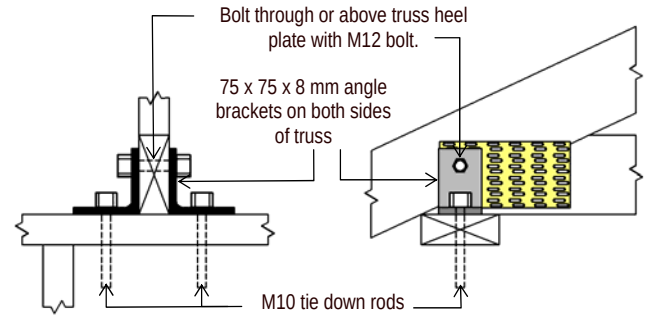
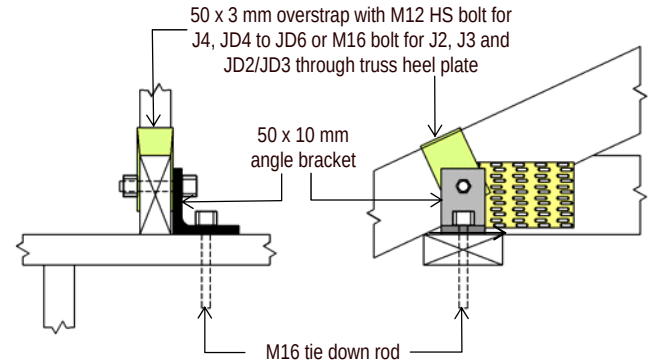
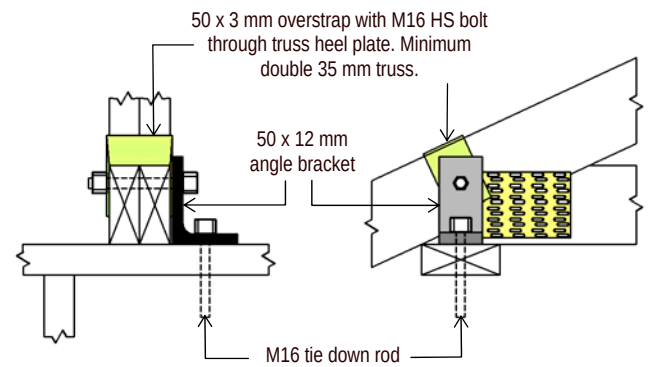
Reading the Chart

1. Use MiTek software to design the truss and bracket fixing required based on fixing arrangements listed in Table 1.

For further assistance with Hold down details to Timber Framing, contact your nearest MiTek Engineering Design Office.

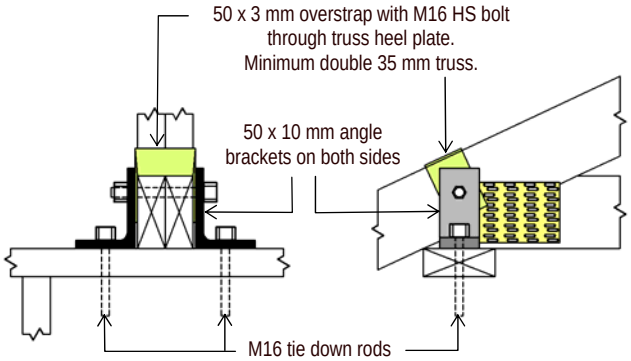
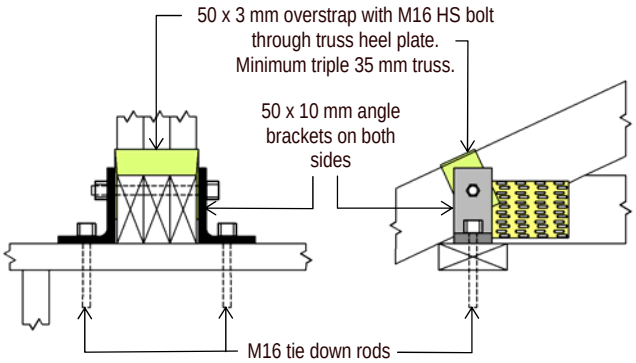
Hold Down Details To Timber Framing

Table 1: Uplift Capacity of Truss Hold Down Details to Timber Framing

Hold Down Details	Fixing Type	Uplift Capacity (kN)						
		Joint Group						
		J2	J3	J4	JD2/ JD3	JD4	JD5	JD6
	MIUG26-1A 12 mm cup head Bolt	-	-	10	-	16	11	8
	MIUG26-1B 16 mm cup head Bolt	20	15	-	20	-	-	-
	MIUG26-2A M12 Bolt	20	15	10	-	16	11	8
	MIUG26-3A M12 HS Bolt	-	-	16	-	23	18	15
	MIUG26-3B M16 Bolt	34	25	-	34	-	-	-
	MIUG26-4A M16 HS Bolt	49	44	28	49	44	36	28

Hold Down Details To Timber Framing

Table 1: Uplift Capacity of Truss Hold Down Details to Timber Framing (Continued)

Hold Down Details	Fixing Type	Uplift Capacity (kN)						
		Joint Group						
		J2	J3	J4	JD2/ JD3	JD4	JD5	JD6
	MIUG26-5A M16 HS Bolt	76	54	-	76	-	-	-
	MIUG26-5B M16 HS Bolt	-	-	34	-	54	43	34

Notes:

1. For girder trusses in commercial buildings, multiply the design capacity by 0.85.
2. HS – High strength steel bolt (Class 8.8).
3. Overstrap must be tight or packed with non-compressible packing.

References:

1. An Investigation of Truss Hold Down. TR No.44, James Cook University, Cyclone Testing Station October 1996.
2. AS 1720.1 Timber Structures Code. Standards Australia 1997.